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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,274	04/07/2004	Michael W. Pantoliano	044988-0308977	9875

21971	7590	06/15/2005

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EXAMINER
ZHOU, SHUBO

ART UNIT	PAPER NUMBER
1631	

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>1</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>4/21/05</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>54-63</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) <u>54-63</u> are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   The art unit designated for this application has changed. Applicant(s) are hereby

informed that future correspondence should be directed to Art Unit 1631.

2.   Applicants' response to the restriction requirement mailed 3/21/05 is acknowledged.

However, it is noted, as also indicated by applicants in the response, that the restriction

requirement was based on claims 1-53, which were canceled in the preliminary amendment filed

4/7/04. Applicants are advised that the previous restriction requirement is hereby vacated. The

following restriction requirement is based on the new claims 54-63 filed 4/7/04.

Sequence Rules

3.   This application contains sequence disclosures that are encompassed by the definitions

for nucleotide and/or amino acid sequences set forth in 37 CFR 1.821(a)(1) and (a)(2).

However, this application fails to comply with the requirements of 37 CFR 1.821 through 1.825

because the sequences in Fig.27 of the application are not followed by a sequence identifier

(SEQ ID NO:X). Applicants are reminded that it is required that SEQ ID NOs be amended into

the specification at each sequence, and that when a sequence is presented in a drawing,

regardless of the format or the manner of presentation of that sequence in the drawing, the

sequence must still be included in the Sequence Listing and the sequence identifier must be

used, either in the drawing or in the Brief Description of the Drawings. Applicants are given the

same response time regarding this failure to comply as that set forth to respond to this office

action. Failure to comply with these requirements may result in ABANDONMENT of the

application under 37 CFR 1.821(g). Extensions of time may be obtained by filing a petition

accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

Restriction/Election Requirement

4.   Restriction to one of the following inventions is required under 35 U.S.C. § 121:

I.   Claims 54-59, drawn to a method for identifying a ligand that binds to a protein,
classified in Class 436, subclass 89.

II.   Claims 60-63, drawn to a computer program product, classified in Class 702,
subclass 19.

5.   The inventions are distinct, each from the other because of the following reasons:

The inventions of Groups I and II are independent/distinct inventions because the

inventions have different structures: group I is an invention of process for identifying a molecule

binding to a protein. The invention requires receiving unfolding data that indicates thermal

unfolding as a function of temperature for a protein, determining an unfolding temperature in the

presence of the molecule from the unfolding data, comparing the unfolding temperature midpoint

for the protein incubated with the molecule with the unfolding temperature midpoint for the

protein in the absence of the molecule, and determining that the molecules tested for binding

really binds to the protein when a difference between the unfolding temperature midpoint for the

protein in the presence of the molecule and unfolding temperature midpoint for the protein in the

absence of any molecules tested for binding. The invention of group II, however, is a computer

program product. It comprises a computer usable medium having "control logic" in the medium

to causing a computer to process thermal unfolding data. While the program product seems to be

used in the area of processing thermal unfolding data, it only causes a computer to generate

thermal unfolding data from fluorescence information, to generate thermal curves from the

thermal unfolding data and to compare the thermal unfolding curves. It does not contain specific

control logic to cause a computer to perform the invention of group I. Specifically it does not

contain specific control logic to cause a computer to receive unfolding data that indicates thermal

unfolding as a function of temperature for a protein, determine an unfolding temperature in the

presence of the molecule from the unfolding data, compare the unfolding temperature midpoint

for the protein incubated with the molecule with the unfolding temperature midpoint for the

protein in the absence of the molecule, and determine that the molecules tested for binding really

binds to the protein when a difference between the unfolding temperature midpoint for the

protein in the presence of the molecule and unfolding temperature midpoint for the protein in the

absence of any molecules tested for binding. Moreover, the product of group II is not disclosed

in the specification to be used or otherwise involved in the process of the invention of group I.

The inventions of group I and II have a separate status in the art as shown by their different

structures for the products and different steps and materials used for the methods, as well as their

different classifications.   As such, it would be an undue search burden to examine both groups

together.

6.   Because these inventions are independent/distinct for the reasons given above, have

acquired a separate status in the art, and thus are usually published separately in the literature

because of their recognized divergent subject matter, and/or acquired a separate status in the art

as shown by their different classification, there would be undue search burden if they were

examined together. Therefore, restriction for examination purposes as indicated is proper.

7.   Applicant is advised that the reply to this requirement to be complete must include an

election of the invention to be examined even though the requirement be traversed (37 CFR

1.143).

8.   Applicant is reminded that upon the cancellation of claims to a non-elected invention, the

inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the

currently named inventors is no longer an inventor of at least one claim remaining in the

application. Any amendment of inventorship must be accompanied by a request under 37 CFR

1.48(b) and by the fee required under 37 CFR 1.17(i).
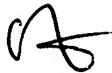

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Shubo (Joe) Zhou, whose telephone number is 571-272-0724.

The examiner can normally be reached Monday-Friday from 8 A.M. to 4 P.M. If attempts to

reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel,

Ph.D., can be reached on 571-272-0718. The fax phone number for the organization where this

application or proceeding is assigned is 571-273-8300. Any inquiry of a general nature or

relating to the status of this application or proceeding should be directed to Patent Analyst Tina

Plunkett whose phone number is (571) 272-0549.

        Patent applicants with problems or questions regarding electronic images that can be

viewed in the Patent Application Information Retrieval system (PAIR) can now contact the

USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are

available to answer your questions daily from 6 am to midnight (EST). The toll free number is

(866) 217-9197. When calling please have your application serial or patent number, the type of

document you are having an image problem with, the number of pages and the specific nature of

the problem. The Patent Electronic Business Center will notify applicants of the resolution of

the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public. For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

Shubo (Joe) Zhou, Ph.D.

Patent Examiner

ARDIN H. MARSCHEL
SUPERVISORY PATENT EXAMINER   6/13/05